

In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Original) A pixel structure of an active matrix organic light-emitting diode (OLED) display, comprising:
 - a first transistor having a gate terminal coupled to a scan signal and a drain terminal coupled to a data signal;
 - a storage capacitor having two terminals coupled to a source terminal of the first transistor and a reference node respectively, the reference node having a second voltage;
 - a second transistor having a gate terminal coupled to the source terminal of the first transistor and a source terminal coupled to the reference node; and
 - an OLED having a cathode coupled to a drain terminal of the second transistor and an anode coupled to a first voltage exceeding the second voltage;wherein the second transistor is an amorphous silicon thin film transistor (a-Si TFT), and an equivalent channel width/length (W/L) ratio of the second transistor exceeds 10.

2. (Original) The pixel structure as claimed in claim 1, wherein the second voltage is a ground or a low voltage.
3. (Original) A pixel structure of an active matrix organic light-emitting diode (OLED) display, comprising:
- a switching transistor having a gate terminal coupled to a scan signal and a drain terminal coupled to a data signal;
- a storage capacitor having two terminals coupled to a source terminal of the switching transistor and a reference node respectively, the reference node having a second voltage;
- a plurality of driving transistors connected in parallel, each having a gate terminal coupled to the source terminal of the switching transistor, a source terminal coupled to the reference node, and a drain terminal; and
- an OLED having a cathode coupled to the drain terminals of the driving transistor and an anode coupled to a first voltage exceeding the second voltage;
- wherein the driving transistors are amorphous silicon thin film transistors (a-Si TFT), wherein the relationship between an equivalent channel width/length (W/L) ratio R of the driving transistor and the number of driving transistors N is $R \geq \frac{10}{N}$.

4. (Original) The pixel structure as claimed in claim 3, wherein the second voltage is a ground or a low voltage.

5. (Original) An active matrix organic light-emitting diode (OLED) display, comprising:

a panel, comprising a plurality of pixels, each comprising a first transistor having a gate terminal coupled to a scan signal and a drain terminal coupled to a data signal; a storage capacitor having two terminals coupled to a source terminal of the first transistor and a reference node respectively, the reference node having a second voltage; a second transistor having a gate terminal coupled to the source terminal of the first transistor and a source terminal coupled to the reference node; and an OLED having a cathode coupled to a drain terminal of the second transistor and an anode coupled to a first voltage exceeding the second voltage; wherein the second transistor is an amorphous silicon thin film transistor (a-Si TFT), and an equivalent channel width/length (W/L) ratio of the second transistor exceeds 10.

6. (Original) The active matrix OLED display as claimed in claim 5, wherein the second voltage is a ground or a low voltage.

7. (Original) An active matrix organic light-emitting diode (OLED) display, comprising:

a panel, comprising a plurality of pixels, each comprising a switching transistor having a gate terminal coupled to a scan signal and a drain terminal coupled to a data signal; a storage capacitor having two terminals coupled to a source terminal of the switching transistor and a reference node respectively, the reference node having a second voltage; a plurality of driving transistors connected in parallel, each having a gate terminal coupled to the source terminal of the switching transistor, a source terminal coupled to the reference node and a drain terminal; and an OLED having a cathode coupled to the drain terminals of the driving transistor and an anode coupled to a first voltage exceeding the second voltage; wherein the driving transistors are amorphous silicon thin film transistors (a-Si TFT), wherein the relationship between an equivalent channel width/length (W/L) ratio R of the driving transistor and the number of driving transistors N is $R \geq \frac{10}{N}$.

8. (Original) The active matrix OLED display as claimed in claim 7, wherein the second voltage is a ground or a low voltage.

9. (Original) A pixel structure of an active matrix organic light-emitting diode (OLED) display, comprising:

a first transistor having a gate terminal coupled to a scan signal and a drain terminal coupled to a data signal;

a storage capacitor having two terminals coupled to a source terminal of the first transistor and a reference node respectively, the reference node having a second voltage;

a second transistor having a gate terminal coupled to the source terminal of the first transistor and a drain terminal coupled to the reference node; and

an OLED having an anode coupled to a source terminal of the second transistor and a cathode coupled to a first voltage less than the second voltage;

wherein the second transistor is an amorphous silicon thin film transistor (a-Si TFT), and an equivalent channel width/length (W/L) ratio of the second transistor exceeds 10.

10. (Original) The pixel structure as claimed in claim 9, wherein the second voltage is a high voltage.

11. (Original) A pixel structure of an active matrix organic light-emitting diode (OLED) display, comprising:

a switching transistor having a gate terminal coupled to a scan signal and a drain terminal coupled to a data signal;

a storage capacitor having two terminals coupled to a source terminal of the switching transistor and a reference node respectively, the reference node having a second voltage;

a plurality of driving transistors connected in parallel, each having a gate terminal coupled to the source terminal of the switching transistor, a drain terminal coupled to the reference node, and a source terminal; and

an OLED having an anode coupled to the source terminals of the driving transistor and a cathode coupled to a first voltage less than the second voltage;

wherein the driving transistors are amorphous silicon thin film transistors (a-Si TFT), and the relationship between an equivalent channel width/length (W/L) ratio R of the driving transistor and the number of driving transistors

$$N \text{ is } R \geq \frac{10}{N}.$$

12. (Original) The pixel structure as claimed in claim 11, wherein the second voltage is a ground or a high voltage.

13. (Original) An active matrix organic light-emitting diode (OLED) display, comprising:

a panel, comprising a plurality of pixels, each comprising a first transistor having a gate terminal coupled to a scan signal and a drain terminal coupled to a data signal; a storage capacitor having two terminals coupled to a source terminal of the first transistor and a reference node respectively, the reference node having a second voltage; a second transistor having a gate terminal coupled to the source terminal of the first transistor and a drain terminal coupled to the reference node; and an OLED having an anode coupled to a source terminal of the second transistor and a cathode coupled to a first voltage less than the second voltage; wherein the second transistor is an amorphous silicon thin film transistor (a-Si TFT), and an equivalent channel width/length (W/L) ratio of the second transistor exceeds 10.

14. (Original) The active matrix OLED display as claimed in claim 13, wherein the second voltage is a high voltage.

15. (Original) An active matrix organic light-emitting diode (OLED) display, comprising:

a panel, comprising a plurality of pixels, each comprising a switching transistor having a gate terminal coupled to a scan signal and a drain terminal coupled to a data signal; a storage capacitor having two terminals coupled to a source terminal of the switching transistor and a reference node respectively, the reference node having a second voltage; a plurality of driving transistors connected in parallel, each having a gate terminal coupled to the source terminal of the switching transistor, a drain terminal coupled to the reference node, and a source terminal; and an OLED having an anode coupled to the source terminals of the driving transistor and a cathode coupled to a first voltage less than the second voltage; wherein the driving transistors are amorphous silicon thin film transistors (a-Si TFT), and the relationship between an equivalent channel width/length (W/L) ratio R of the driving transistor and the number of driving transistors N is $R \geq \frac{10}{N}$.

16. (Original) The active matrix OLED display as claimed in claim 15, wherein the second voltage is a high voltage.